

COLLAGE & ANXIETY

Collage Making and Anxiety

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Art Therapy and Counseling (MAATC)

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Institutional Review Board (IRB)
Albertus Magnus College

DATE: Feb. 5, 2021

Dear Alessandra:

This letter serves to officially notify you of approval by the Albertus Magnus College IRB for you to conduct your study on collage making and its effect on anxiety as described in your IRB application. Please ensure that the confidentiality of your research participants is properly protected and that you remain within the boundaries you stated in the IRB application. If those boundaries change in relation to the study participants, please notify the IRB as an amendment may be necessary.

Your study is authorized to begin as of the date of this approval letter and is valid for one year, ending on February 5th, 2022.

If you have any questions, please contact Dr. Joshua Abreu, the IRB Administrator, by e-mail at jabreu1@albertus.edu.

Sincerely,

Joshua Abreu, Ph.D. IRB Administrator

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Abstract

Anxiety disorders are among the most frequently diagnosed psychological disorders. Research has also indicated that collage making can be effectively used for self-expression and may be helpful in anxiety reduction. The present research examined the efficacy of two collage art making directives as a means for lowering anxiety. Adult participants ($N = 33$) were randomly placed in either a magazine collage making condition or a pre-cut/torn collage making condition. Anxiety was measured pre-post using the State Trait Anxiety Inventory, State scale. Data analysis showed that collage making had significant positive effects in reducing self-reported levels of anxiety. The first hypothesis, that engaging in collage making would effectively reduce levels of state anxiety, was supported. The second hypothesis, that those sourcing images from magazines as compared to using pre-cut images, would experience a greater reduction in anxiety was not supported. There was not a significant difference between groups as both groups experienced significant reductions. Additionally, the study was conducted remotely via Google Meets due to the Covid-pandemic, and exploratory analyses were conducted to look at the relationship between Covid-related anxiety and self-reported anxiety. No significant relationships were found. This study did provide preliminary evidence that collage making could be effective in reducing anxiety. Some thoughts for future research are addressed.

Collage Making and Anxiety Reduction

The National Institute of Mental Health (2016) has noted that anxiety is a pervasive problem in the United States. While anxiety disorders continue to be among the most frequently diagnosed psychological disorders, it is noteworthy that diagnoses of anxiety have increased considerably over the last half of the 20th century (Ashlock et al., 2018). According to the National Institute of Mental Health (2016), anxiety disorders affect 18.1% of the U.S. population.

Its prevalence is likely underestimated as statistics generally do not include those individuals who are battling with anxiety yet do not seek help, have been misdiagnosed, or do not recognize that they have a problem (Ashlock et al., 2018). McLean et al. (2011) also reported that women were two times more affected by anxiety symptoms than men. The American Psychiatric Association (2013) has described anxiety as extreme fear and anticipation of future events, and Generalized Anxiety Disorder (GAD) as a combination of emotional apprehensiveness, restlessness, feeling easily fatigued, difficulty concentrating, irritability, tense muscles, and difficulty sleeping. Individuals with anxiety disorders experience impaired quality of life and functioning, suggesting that more research about this disorder could be helpful.

Currently, there is a worldwide pandemic which appears to be impacting levels of anxiety around the world. In a recent study, researchers in Ireland performed the first assessment of rates of anxiety and depression due to COVID (Hyland et al., 2020). One of their aims was to approximate the current prevalence of Generalized anxiety Disorder (GAD) and depression linked to the pandemic. The results indicated that GAD and depression were common experiences in the population during the initial phase of the COVID-19 pandemic: GAD (20.0%), depression (22.8%) and GAD or depression (27.7%). It would be important for current

research to address treatment to respond to anxiety that may very well be related to the present pandemic.

Current literature supports numerous factors that cause of anxiety. Anxiety is caused by internal factors and external stressors. These include, but are not limited, to the following: biological structural and functional abnormalities, genetics, cognitive and behavioral processes, neural psychic activity, vulnerability, and social stressors (Sadock, 2015). The National Institute of Mental Health (2016) suggested that the most common clinical treatments for anxiety include cognitive-behavior therapy, medication, or a combination of the two. For example, in a study by Weisburg et al. (2014), 534 participants diagnosed with anxiety were followed over a five-year period to observe what types of treatment they utilized. Participants were evaluated at baseline, 6 and 12 months post-baseline, and then yearly for up to five years. A 32 item self-report measure assessed key features of DSM-IV anxiety disorder criteria. Results indicated that at both the initial intake and at the end of the five-year period, pharmacological treatments were used far more than participation in psychotherapy (2014). Additionally, Gould et al. (1997) reported that both CBT and pharmacotherapy are effective treatments for GAD. However, researchers indicated that medications carry the risks of side effects and potential withdrawal concerns, making CBT a safer treatment option for anxiety disorders.

There are numerous types of psychological interventions that address anxiety. A quantitative study by Arntz (2002) compared cognitive therapy (CT) and applied relaxation (AR) as treatments for generalized anxiety disorder (GAD) regarding their immediate and long-term effects. Forty-five GAD participants were recruited from a community mental health center and evaluated before and after a 12-session treatment protocol. Patients in the CT group were challenged to reframe dysfunctional thoughts into rational thoughts, while patients in the AR

group were instructed to identify early signs of anxiety and then apply relaxation skills. Data was collected through a self-report diary where participants would indicate their average level of anxiety every three hours. Additionally, a Dutch version of Spielberg's State Trait Anxiety Inventory was used as a measure of state and trait anxiety. Results revealed that both CT and AR approaches appeared equally effectual. In the short-term, those who received AR showed a reduction in anxiety one month after treatment, whereas at the six-month follow-up point both interventions impacted anxiety reduction at the same rate. Cognitive therapy and applied relaxation are two of the many effective interventions to help mitigate anxiousness.

One current focus for understanding anxiety disorders is the study of the brain. Neuroscientists have been tracking the brain's response to anxiety. DeBoer et al. (2012) reviewed various studies that examined the effects of exercise on anxiety and its impacts as to different parts of the brain. Streeter (2007) found that a 12-week yoga intervention produced greater anxiety reduction than a metabolically matched walking intervention. Strohle et al. (1997) found that exercise (30 min) reduced anxious responding. Exercise may also alleviate anxiety, to an extent, by enhancing perceived coping ability or self-efficacy.

Another modality for treating anxiety is art therapy. Art therapy is a primarily non-verbal modality of treatment that allows clients to communicate their feelings through the use of visual expression (Grossman, 1981). The practice of art therapy provides participants with the practice of using line, color, and shape to express themselves while discharging emotional energy, such as anxiety (Sandmire, 2012). Aaron (2011) conducted quantitative research in order to examine how creative endeavors might reduce anxiety in a normal population of healthy, undergraduate college students. The population was not screened. Participants ($N=90$; 29 male; 61 female) were randomly assigned to participate in one of three conditions: individual art project, group art

project, or non-art project. Participants completed the self-report State-Trait Anxiety Inventory (STAI). Trait was administered at pre, and state at pre-post to measure change in anxiety. Group differences in the continuous variable of trait anxiety were determined via analysis of variance (ANOVA). The main analysis of interest was designed to determine whether or not state anxiety changed due to the group assignment. Results showed that students within both individual and group art project conditions reported significantly reduced levels of state anxiety post-intervention as compared to the non-art condition. Contrariwise, participants in the non-art project group showed no significant changes in state anxiety levels.

The efficacy of using art therapy to reduce anxiety was further studied by Ashlock et al. (2018), examining if using coloring books was effective for reducing anxiety. Participants included 160 undergraduate students, ages 18-25, who were asked to complete the STAI to measure levels of anxiety. Participants were randomly assigned to one of four intervention groups: free-form drawing, preprinted mandala, mandala creation, and coloring book group. After the intervention, participants again completed the STAI. Results indicated that there was a significant change in mean anxiety in all four conditions, suggesting that using coloring books is effective at reducing anxiety.

Further, Sandmire et. al (2012) conducted research designed to study the effects of art making on stress levels. Participants included fifty-seven undergraduate students who were asked to complete the STAI before being randomly assigned to one of two groups. Participants in the experimental condition made art, while those in the control group sat in comfortable chairs in another room where they were allowed to socially interact, but were not permitted use of electronic devices. After 30-minutes participants from both conditions were again asked to complete the STAI. The mean state anxiety score between pre-activity and post-activity

decreased significantly in the art making group. Results from this study supported the hypothesis that thirty minutes of art making would significantly reduce participant's state-related anxiety.

Additionally, Curry and Kasser (2005) investigated anxiety reduction among different art interventions. The STAI was administered to eighty-four students before and after the intervention. The experimental groups participated in coloring a mandala, a plaid square, or free-form coloring. Results demonstrated that students in the mandala coloring group and the plaid imagery coloring experienced a larger reduction in anxiety compared to the other groups. The results suggested that both coloring mandalas and having a structured image to color were helpful in reducing anxiety.

It has also been theorized that art making engages both left and right hemispheres (Belkofer, 2008). The brain and art making intersect because art-making engages both mind and body (King, 2017). Prior research has suggested that art making may be a means of reducing activity in the amygdala and changing brainwave activity (Chilton, 2013) that would support a decrease in anxiety. The connections between the nervous system, the endocrine system and the immune system all shed light on art making's ability to reduce anxiety. Belkofer (2008) posited that the art therapy process helped to regulate and convert stress and used biomarker measures to this.

Art therapy utilizes both hands and both hemispheres of the brain, pairing the unconscious, emotional right-brain sensations with rational, verbal left-brain thought process (Chapman, 2014). Therapeutic art interventions have been noted to activate relaxation which can be associated with a parasympathetic response that maintains anxiety reduction (Hass-Cohen, 2008). Ogden and Minton (2000) noted that the art making process quiets the amygdala, the brain's alarm button, promoting more effective coping responses. Theoretically, the mere act of

creating art engages the whole brain, as avowed by neuroimaging technology that allows for sophisticated understanding of art and how the observer's brain reacts within the aesthetic experience (King et al., 2017). King's quantitative EEG study explored the differences from baseline in cortical activity immediately following art making and immediately following the performance of a simple motor task with the hand. Brain Body Imaging (MoBI) allowed for recording of brain activity using EEG and fNIRS to capture what the brain does, organizes, and senses. This advanced technology afforded opportunities to conduct research while engaging in a task of creativity.

King et al.'s (2017) research design brought together a group of 10 participants (18 years or older) recruited to explore the link between creativity and neuroscience. Materials for the art making include chalk pastels, a white piece of paper with a pre-drawn mandala, or circle, at the center. Standard gold cup EEG surface electrodes were strategically attached to the scalp by the neuro technologist, after which each participant followed the same order of EEG data collection: baseline, art making, post art making, coin flip, pencil rotation, post motor tasks. First, to promote abstract thinking, subjects were given 12 minutes and directed to use the art materials to explore how they were feeling drawing lines, shapes and using colors in the circle. The pre-drawn mandala was included to provide structure and reduce anxiety that may be triggered by EEG procedures. After the art making data was collected, the rote motor tasks were performed. During the first six minutes participants were asked to continually flip a coin; during the last six minutes they were asked to rotate a pencil between their fingers using their dominant hand. As measured by EEG, King et al. found an increase in power seen after art making that was greater than the increase in power seen after the rote motor tasks. This study underscored the fact that there are differences in brain activation in a creative versus a pure sensorimotor-based

activity, proposing that the motor system of the brain is involved divergently based on the components of art that the observer perceives.

Belkofer and Lukasz (2008) recognized that the EEG is a valuable and novel tool for conducting research on the impact of art therapy. In an attempt to work toward a neurological understanding of art therapy, a single-subject pilot study measured the patterns of electrical activity of a subject's brain after an hour spent painting and drawing. Two 22-minute EEG readings administered by a lab technician were taken before making art and the other after making art using watercolor paints, charcoal sticks, and graphite pencils. Images were created spontaneously; there was no art directive. Results demonstrated EEG changes with all four brainwave frequencies and indicated that neurobiological activity after art making was statistically different from activity measured at a state of rest. Additionally, a large increase in temporal lobe activity was observed. This is the part of the brain that is concerned with emotion, sense of time, and mystical states of consciousness. It is possible then, that temporal lobe activation may play a role in the strong emotional states of consciousness often associated with creating art that would support a reduction of anxiety.

Additionally, art therapists are concerned with offering different techniques for art making which will have different impacts on emotional expression. One technique that has been studied is collage. The term collage derives from the French, meaning a glued work (Vaughn, 2005). Essentially, different found images (often from magazine) are cut and pasted to create a new image. Helen Landgarten (1993) further defined collage as a type of media that beginning artists can use to express feelings with ease. Stallings (2009) cited that collage, "allow[s] for expression beyond the verbal and cognitive abilities" (p. 140). Butler-Kisber (2008) asserted that collage making may aid in a person's awareness of the unconscious with provided images

instead of the person needing to generate their own (2008). Further, collage may be used in art therapy as a projective technique so that clients can express their thoughts and feelings that they may or may not be conscious of (Malchiodi, 2010). Gersenblatt (2013) also noted that collage may be used with a diverse population, is not restricted by language, and can bring together fragments in a multidimensional and unified way. It is theorized that completing collages, through organizing and reorganizing to create new compositions, is structured and less threatening than other art forms (Vaughn, 2005).

Curl and Forks (2008) conducted research that sought to assess short-term stress reduction as a function of positive versus negative cognitive focus during collage making and drawing. Participants were randomly assigned to one of four treatment groups and the type of artistic creation (collage or drawing) was combined with a specific cognitive focus: focus on a negative event versus focus on a positive event. The authors hypothesized that the collage making art activity would involve emotional catharsis, and thus help facilitate stress reduction. Forty participants (30 women, 10 men; ages 17-27) were randomly distributed into four treatment groups: a negative-focus condition that involved drawing, a positive-focus condition that involved drawing, a negative-focus involving collage-making, and a positive-focus condition that involved collage. Participants were administered the State Trait Anxiety Inventory as a psychological measure, and heart rates were assessed after completing a manipulation check. An A-2 ANOVA was conducted on changes in STAI scores and changes in heart rate from baseline to post-manipulation. There was a main effect of cognitive focus on STAI scores, such that participants in the positive-focus across both artistic activities experienced a greater reduction in stress, irrespective of the type of art they engaged in. Additionally, they interpreted that a cathartic release provided an instant surge in positive emotion as a result of the collage art

making. These conclusions support the theory that art making is a means of receiving a 'creative high' (Foster, 1992).

More recently, a study by Raffaelli and Hartzell (2016) used qualitative research to examine how young adults who identified as non-artists (males and females; ages 18-27) might respond to collage as compared to drawing tasks. Participants completed a self-report survey and then asked to make two pieces of art, one with drawing materials and one with collage. Each participant was offered an identical selection of color and black and white photocopied collage images and textual material. The study produced three themes: 1) participants identified that collage work required that they pick what fit them, whereas, drawing allowed them to create what they felt was necessary to describe themselves more precisely; 2) collage making offered structure, however it limited expression because of the need to select and assemble, while drawing was perceived as freer and allowed for more creativity; 3) it was easier to depict one's strengths using collage, whereas participants felt that their own artistic skills were limited by their drawing capacities.

Further, Chilton and Scotti (2014) conducted an art-based inquiry using a dialogic method of collage and letter writing. Over a period of four weeks, both researchers created one collage per week, along with a narrative that described the ideas and intentions behind the collage making. Three major themes were identified regarding the properties of collage. The first theme found that collage making as a method of inquiry was a means to interlace layers of knowledge. The second pattern that emerged was that almost all of the collages contained human figures which were interpreted as symbols of self-development. The last theme discovered was that the hands-on experience of physically snipping and gluing images together personified the process of integrating theoretical knowledge.

Based on prior research it is important to examine alternate treatments for anxiety, especially those which may correlate with brain activities associated with anxiety reduction (Belkofer, 2008; DeBoer, 2012; Weisburg, 2014). Research has also indicated that collage making can be actively used for self-expression (Chilton & Scotti, 2014; Curl & Forks, 2008; Rafaelli & Hartzell, 2016) and may be helpful in anxiety reduction. This proposed study will examine whether collage making will help to effectively reduce state anxiety. Further, the techniques for sourcing collage images will be examined. Typically, collage magazine images are either pre-cut by art therapists and presented to clients (Frost, 2001) or clients are given magazines to look through themselves. It is not clear if either of these techniques have different impacts on anxiety levels.

For this present study, it was hypothesized that engaging in collage making would reduce levels of state anxiety. Further, it was hypothesized that participating in collage making by looking through magazines would decrease state anxiety levels to a greater degree than the pre-torn and pre-cut condition.

Method

Participants

The sample included 33 adults, ages 30-65 ($M = 44$; $SD = 17.5$) with 26 females and 7 males. Please refer to Table A for further demographic information regarding the participants in this sample. People were recruited by a sample of convenience with a flyer that offered the incentive of a twenty-dollar gift card to Starbucks (Appendix A).

Materials

Materials for the first group included pre-cut and pre-torn images, scissors, an Elmer's all-purpose glue sticks, and a piece of 11 in. x 14 in. (27.9 cm x 35.6 cm) mixed media Canson paper. All participants were given either pre-cut/pre-torn images or three magazines. All participants received pre-cut/pre-torn images that reflected a similar range of themes (animals,

people, nature, objects, words) and the magazines included images with those same themes. There was an attempt to reflect a wide range of culturally diverse, gender-oriented images for both conditions of art materials.

Materials in the second group included three magazines, with the same scissors, glue sticks, and paper. Images for both groups were sourced using similar magazines.

Instruments

State Trait Anxiety Inventory (STAI)

The State Trait Anxiety Inventory (STAI) was developed in the 1980's by Spielberg and colleagues. It has been widely used both in clinical settings and in research. This scale is based on a 4-point Likert scale and consists of 40 questions of self-report basis. It was founded upon the theoretical conception of anxiety as having two facets (Gustafson et. al, 2020).

The STAI is composed of two forms: The Trait-scale, measuring trait anxiety, and the S-scale, measuring state anxiety. While each scale differs in the time frame being referenced, each is composed of the same 20 statements where participants specify their level of agreement using a Likert-type scale (Aaron et al., 2010). Each item is rated on a 4-point scale (e.g., from “Almost Never” to “Almost Always”). Scores range from 20 to 80 with a higher score indicating greater anxiety. The STAI is appropriate to be used for those who have at least a sixth grade reading level (The State-Trait Anxiety Inventory, 2011). The trait scale was developed to measure the more lasting characteristic presence of the anxious emotion; while the state scale was designed to measure the momentary arousal subjectively experiences as anxiety (Tluczek et. al, 2010).

Aaron et al. (2010) simplified trait anxiety as a more general feeling as opposed to state anxiety that is ‘right now at this moment’ (2010). In their study with 90 college students, Aaron et al. reported the STAI to have good reliability and validity. Test-retest reliability of the T-scale

was reasonably high for college students; values ranged from .73 to .86. Due to the momentary nature of state anxiety, measures of internal consistency could provide a better index of reliability for the S-scale. The trait version of the STAI demonstrated good concurrent validity as substantiated by the relatively high correlations between the T-anxiety scale and other classic anxiety measures. In addition, both S and T-scales demonstrated high construct validity. T-scale values were higher among anxious groups as opposed to healthy college students and values of the S-scale were higher when collected under conditions of stress versus non-stressful conditions. For the present study, due to the short-term nature of the research, participants were only asked to fill out the state questions after the induction, before the art intervention, and a second time after the intervention.

Procedure

Participants were recruited from a flyer (Appendix A) that was distributed in public locations and online via Facebook posts. Participants were randomly assigned to one of two conditions. One group engaged in collage making by sorting through images in magazines ($n = 17$) and the other group created a collage with pre-cut and pre-torn images ($n = 16$).

Meeting individually and synchronously via “Google Meet” occurred due to the Covid-pandemic. Meetings were arranged via phone or email. Participants were delivered a folder that included the informed consent, image release, demographic, debriefing form, two copies of the state scale, and materials: pre-cut and pre-torn images or 3 magazines, scissors, two glue sticks and a piece of paper. Pick-ups were arranged to gather forms and materials. The researcher arranged to meet individually on Google Meet with each participant, and guided participants in all aspects of data collection.

Each participant was given two consent forms (Appendix B) that includes the information regarding the overall purpose of the study, participation procedures, risks and benefits of taking part in the study, how confidentiality will be maintained, and the voluntary nature of the study. Participants signed both forms and kept one for their own records. They were also be given an image release form (Appendix C), permitting their artwork to be photographed. Once the forms were signed, they were placed back in the folder to be collected after the session. Next, all participants were asked to visualize a mildly stressful event related to the Covid-19 pandemic for one minute, as an anxiety induction. After visualizing, all participants filled out the state questions of the pre-S-scale to measure their anxiety before the interventions, and then placed this coded document back into the folder.

All participants were allotted 25 minutes to create a collage, using the two comparative techniques. They were given a prompt of, “Take a white piece of paper to design a collage of your pleasing. A collage is made by combining multiple images of your choosing, in any way that you would like. You may use the scissors provided to further cut images or tear them before gluing them to the paper surface. Use your imagination as much as you want. There are no right or wrongs. Your artistic ability is not being judged.” Participants in the magazine group were also given the additional prompt of “Please resource images only, and refrain from reading articles in the magazines.”

After all art making was completed at the end of the 25-minute interventions, participants were asked to fill out the coded post-S-scale once again and then complete a demographic form (Appendix D) that identified age, race, ethnicity, gender, and Covid-10 anxiety impact level. Upon completion, participants received a debriefing form that informed the nature of the study. In order to mitigate any residual anxiety, as a part of debriefing participants

will be given resources such as a hotline, as well as a website to view baby animals (Appendix E). Participants were asked to include their collages in the folders for the researcher to collect. The researcher photographed all artwork submitted. Some participants requested that their artwork be returned after the study was completed by indicating this on the artwork release form.

Results

The first hypothesis was that engaging in collage making would effectively reduce levels of state anxiety. Across both groups, pre-test STAI: Y-1 scores ranged from a minimum score of 24 to a maximum score of 71 out of 80 possible points ($M=43.12$, $SD=12.40$). The difference in the mean from pre to post was 16.41. The post-test STAY:Y-1 scores ranged from a minimum score of 20 to a maximum score of 59 ($M=27.30$, $SD=7.61$). The first paired samples t-tests was conducted only in the magazine condition. In the magazine condition ($N = 17$), the pre-total mean was 44.24 ($SD= 10.86$) and the post-total mean was 27.82 ($SD=5.45$). There was a significant difference in the scores from pre-test to post-test in the magazine condition; $t(16) = 6.75$, $p=0.00$. A second paired samples t-test showed that there was also a significant difference in the scores from pre-test ($M=41.94$, $SD=14.12$) and post-test ($M=26.75$, $SD=9.54$) in the pre-cut condition; $t(15)=3.83$, $p=.002$.

The second hypothesis was that the participants in the magazine collage condition would experience a significantly greater reduction in anxiety, when compared to the participants in the pre-cut collage condition. An independent samples t-test was conducted to compare the post-test mean scores between conditions. Levene's Test for Equality of Variances indicated that equal variances can be assumed for this sample ($p=.585$). While both groups experienced a significant reduction from pre-test to post-test, these differences between them were not significant; $t(31)=.40$, $p=.692$.

Exploratory analyses were conducted to look at the relationship between Covid-related anxiety and self-reported anxiety during the study. The minimum score for ‘not at all’ was 28 and the maximum score was 39, ($M=33.50$, $SD=7.78$). The minimum score for ‘somewhat so’ was 24.00 and the maximum score was 71.00 ($M=40.50$, $SD=12.95$). The minimum score for ‘moderately so’ was 24.00 and the maximum score was 64.00 ($M=46.67$, $SD=11.34$). The minimum score for ‘very much so’ was 26.00 and the maximum score was 69.00 ($M=43.45$, $SD=13.83$). There was not a significant relationship between anxiety about Covid-19 and the self-reported anxiety scores at pre-test ($r(31)=.19$, $p=.29$) (or post-test ($r(31)=.08$, $p=.68$). See Table 1 for participant demographics and relationship between Covid-19 and anxiety.

The results listed above indicate that engaging in collage making, regardless of the condition, reduces state anxiety. While both conditions experienced a reduction in anxiety, the participants in the magazine condition did not experience a significantly greater reduction in anxiety when compared to the pre-cut condition. The analysis suggests that the STAI is a valuable measure to evaluate state anxiety pre and post. There is scarce existing literature that correlates collage and anxiety; thus, there are no studies available for direct comparison that might support reliability or validity of the results of the present study.

Discussion

The present research examined the efficacy of an art therapy directive as a means for lowering anxiety. The design included a psychological instrument used to establish anxiety levels before and after an artistic intervention: collage making. It was hypothesized that adults who made collages would show a decrease in anxiety, as measured by self-reported reduction in anxiety. It was further hypothesized that those who sourced images from magazines would experience a larger reduction in anxiety, as compared to those who were given pre-cut/torn

images. The results of this study support the first hypothesis as there was a significant reduction in anxiety after engaging in collaging making for both groups of participants who made collages. However, there was no significant difference between conditions, therefore the second hypothesis was not supported.

No substantial differences in anxiety reduction between the two collage making conditions suggests that the collage images themselves as part of the act of collage-making was most compelling. The materials were prepared so that being presented with whole pages of magazines would encourage further cutting or tearing. Scissors offer precisions and require complete focus; tearing, does not, but both of these techniques may have required attention that took away from reducing anxiety. The placing and gluing of images may have been more calming than the means of cutting or tearing. There were no comments about using scissors, gluing, or tearing and whether or not they felt therapeutic. However, when participants discussed their images, they highlighted their feelings as they related to their images. This suggest that it was the images themselves that evoked a reduction in anxiety, not the way in which they were sourced.

In regard to the overall art making experience, it appeared as though participants were thoroughly engaged in creating collages. This observation supports the belief that an art-based activity, in this case, collage, was non-threatening. The technique led to an easily obtainable level of satisfaction without a need for artistic talent, as the literature had suggested. There was a verbal declaration of ease when people realized they were not being asked to paint or draw anything. Any reluctance that participants may have expressed in the beginning seemed to dissipate once they started cutting or gluing. The results of this study support the literature which

has indicated that collage work can help to effectively reduce anxiety due to its easy and non-threatening nature, especially for non-artists.

The collage artworks themselves showed few differences between those with the highest anxiety and those with the lowest anxiety reductions. There were four noted themes for the group who had the highest anxiety reduction scores: 1) all had a central figure; 2) imagery oriented outwards; 3) inclusion of a human figure in the collage; and, 4) did not use torn images. Figure 2, created by a 65-year-old Caucasian male in the highest scoring anxiety group, is an example of a composition that conveys these themes. The participant created a very succinct, compartmentalized collage which consisted of five carefully placed squares/rectangles, with common content themes: people, nature, animals, words or phrases. He hurriedly and heavily patted each image after gluing. The participant reported that these were some of the things that brought him joy, in addition to memories of growing up in Italy.

On the other hand, two themes were noted among those who had the lowest change in anxiety: 1) use of torn images; 2) inclusion of some negative words. Figure 3, created by a 30-year-old Caucasian female in the lowest scoring anxiety condition, is a visual example that depicts these two themes. The collage has torn images and some words that suggest negativity. This participant discussed her recent divorce as it related to her artwork: she reported having a hard time loving and forgiving herself but the butterfly represents metamorphosis and change. “That’s why it says travel, going solo and fearless because I’m on my own and trying to live fearlessly,” she added. She expressed feeling accomplished when she was finished with the collage and enjoyed expressing her feelings by using symbolism and art, while noting that her content was “bittersweet.”

Among all participants another theme emerged: almost the entire page was covered with collage images, leaving hardly any empty space. Additionally, it was noted that most collages were created in a horizontal orientation with the inclusion of a variety of images such as animals, people, and words. Figure 4, created by a 36-year-old Caucasian male commented how he did not want to have negative space or random “dead zones” and went on to describe some of his collage in more detail. Time machines refers to childhood and how people may come to have regret if they don’t “explore the fire within” and end up wishing they could go back be being a child (image of baby). In contrast, Figure 5, created by a 30-year-old Caucasian male, depicts a collage with a lot of negative space. Some noted trends in the making of the collages were that few people made any additional cuts or tears to the pre-cuts (they glued them as they found them). Interestingly, the few participants who identified as artists used few to zero words in their images. This may support that notion that words are not necessary as part of art therapy.

It was observed that participants listened to the prompt which evoked some stress, as it identified Covid-19, and then most people gravitated toward non-stressful imagery, particularly things that they enjoyed doing, appreciated, or things that inspired them. Most people included people, animals, nature, and words in each of their collages, despite the condition. Covid-related images did appear in a handful of collages, but not the majority. Additionally, only two people used gory or destructive images, and these both identified as male. Both used this central image as it related the rest of their collage as telling a story.

Few differences were observed between conditions. Most people in the magazine condition gathered most of their images from only one of the three magazines. It appeared similarly, that those in the pre-cut/torn condition were given too many images to choose from. The notion that more would be better was not the case, as the majority of participants requested

more time, perhaps as a result of being bombarded with too much imagery. Many of the statements of verbal feedback also supported the efficacy of this technique. Some of the most shared comments was, “this is fun,” “I haven’t done one of these since I was a kid,” and “I enjoyed this.” One participant further noted, “I like this, it’s distracting. I wouldn’t call this art, I would call this therapy; it’s totally self-indulgent” finishing with, “but is it the art or is it the mindfulness?” A lot of people said they wish they had more time and more paper. Nobody had anything negative to say.

Participants appeared to confirm that they found expression and creating was made easier because images were provided, and both options to source images (using magazines or pre-cut images) were found to be effective in reducing anxiety. The results suggest that collage may be useful for clinical applications, and that art therapists can use either pre-cut/torn images or magazines for collages with equal value. This is useful for art therapy practice, as many art studios do not have room to store many magazines, and many art therapists do not have the time to pre-cut images. Both materials appear to be equally effective in reducing anxiety. It appeared that collaging was naturally distracting, which may have induced states of mindfulness or flow, suggested by many participants commenting on how fast time was “flying by.”

The present research might be used to further illuminate the unique contributions of collage to health and well-being. Based on the participant demographics, it appeared that collage work was accessible for a wide range in ages. Further studies with a variety of populations, including (but not limited to) substance abuse, grief, depression, and those who cannot use sharps, would be useful for art therapists. A variety of other populations might benefit from collage work, such as those with Attention Deficit Disorder (ADHD), eating disorders, autism, and older adults. The mindfulness aspect of collage could be helpful to those with ADHD and

eating disorders who often struggle with obsessive or intrusive thoughts. The tactile sensation that collage entails could be pleasing to those who have autism. Collage making may be especially valuable with older adults as images allow for recall/recognition to jog impaired memories, though some may need assistance with cutting or adhering glue.

A noted limitation of this research study was conducting the experiments virtually. Some participants did not have a laptop computer that could be tilted in order for the researcher to view the process. It also made it more difficult to establish rapport. Another limitation of this research study was the small sample size. Future research needs to replicate the present study with a larger sample to increase the effect size and the generalizability of results. Another limitation was cultural diversity and ethnicity. A more diverse population with a greater range of ethnicity in the sample would be recommended. The entire sample in the proposed study was Caucasian. Time constraint was another limitation. The brevity of the time period allotted for making art might have impacted the results. Future research should acknowledge extending this time period. It would also be advised to give participant a five or ten-minute heads up.

Some confounds that may have impacted results are related to the materials. Not every participant received the exact same magazines or pre-cuts; however, care was taken to give the same variety of kinds of images as samples to each participant. Future research could address this by providing the same magazines and the same pre-cuts from that magazine for each condition. Additionally, people in the magazine condition did not have time to review all three magazines, while people in the other group did not have time to review all of the pre-cut/torn images. It is recommended that future researchers provide only one magazine and not an excessive number of pre-cut/torn images.. Paper size may have also impacted the experiment, as almost everyone seemed intent on filling the paper. This suggests that task completion may have

dominated the focus, which is somewhat different than engaging in art making for therapeutic effect. While this did not negatively impact the anxiety scores, it may be further examined during future research on collage work.

It is noteworthy to acknowledge the usage of words in the collages. While participants in the magazine group also tended to use words, participants in the pre-cut/torn group received a plethora of words and used more words. Self-identified artists who were participants used a few or no words at all in their collage making. Further research on the value of including such a strong cognitive aspect in the art making might be important for art therapists, especially with regard to the integration of the Expressive Therapies Continuum (Kagin & Lusebrink, 1978).

Concluding, this study has shown that collage making significantly reduced anxiety after a single meeting. Given that anxiety disorders are so prevalent, it is encouraging that the efficacy of another treatment has been demonstrated by empirical research. The easy, non-threatening nature and use of simple materials for collage work suggests that art therapists will continue to offer this technique as a means to reduce anxiety.

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Appendix A- Recruitment Flyer

PARTICIPANTS NEEDED FOR AN ART STUDY!**CHANCE TO WIN \$20 STARBUCKS GIFT CARD****NO ART SKILLS NECESSARY**

- **who:** adults ages 30-65
- **what:** graduate research study
- **where:** virtually via google meets
- **time:** approximately 1 hour



Interested? please contact Alessandra Macca
cell: (860) 882-4862 email: anmacca@albertus.edu

Appendix B

Informed Consent

This study is being conducted as part of the requirements for the completion of the Masters of Arts in Art Therapy and Counseling degree at Albertus Magnus College. The purpose of this study is to investigate the effects of art making in social interactions.

During this study you will be asked to complete a demographic form and questionnaires involving social interactions and take part in an art making activity. Following the art making, there will be a brief discussion about the process. Participation in this study is confidential and is expected to take approximately 60 minutes. Any discussion and artwork will remain private and confidential without the use of your name. The design of the study requires that the researcher keep or retain the artwork. Please note that art abilities are not a factor and will not be considered. Two potential benefits may include anxiety reduction and an art experience.

This is a completely voluntary study and if for any reason you would no longer like to participate, you are welcome to withdraw at any time. There are no anticipated risks for participating in this study. Benefits of this study may include enjoying art making and assisting a graduate student in the completion of her thesis requirement, as well as contributing to the field of art therapy. The Institutional Review Board (IRB) at Albertus Magnus College has approved this study.

Please inform the researcher if you have any allergies to art materials. If you have any questions or concerns about this study you may contact the following individuals:

The Investigator:

Alessandra Macca

anmacca@albertus.edu

Psychology Advisor:

Siobhan Evarts Ph.D

soevarts@albertus.edu

Art Therapy Advisor:

Abbe Miller Ph.D

amiller@albertus.edu

Or: Chairperson of IRB Joshua Abreu jabreu@albertus.edu

Your signature below indicates that you are between 30 and 65 years of age, have read and understand the description of the study, have had all your questions addressed, and are willing to participate.

Name (print): _____

Signature: _____ Date: _____

___ I received a copy of this form for my record

Appendix C

Art Image Release Form

Your name will not be associated with any of the art you create regarding this research; it will remain confidential. There will only be photographs taken with your given your consent to the information listed below. Images of any art will not include identifying material

I agree to have my artwork photographed *without identifying information* for the following reason(s), check any that apply:

- Educational and training purposes
- Presentation at a professional conference
- Publication in a professional journal
- None of the above

I hereby give consent as noted above for the use of my artwork created during this study.

Print name

Date

Signature

If you later chose to revoke permission for your artwork to be shown as here discussed, it could be too difficult or impossible to contain images already distributed in public settings.

_____ I would like my artwork returned after the completion of the study.

_____ I waive having my artwork returned after the completion of the study.

Appendix D

Demographic Form

Demographic Survey: Collage Study

Age: _____

Gender: (Please check all that you identify with)

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Non-binary
- ☐ Prefer not to answer

Ethnicity: (Please check all that you identify with)

- ☐ African American/Black
- ☐ Asian
- ☐ Caucasian/White
- ☐ Hispanic/Latin
- ☐ Multicultural
- ☐ Native American
- ☐ Pacific Islander
- ☐ Other

Rate how much you believe your anxiety level has been impacted by the Covid Pandemic:

- 1 = not at all
- 2 = somewhat
- 3 = moderately so
- 4 = very much so

Appendix E

Debriefing Form

Debriefing Form: Collage Study

The purpose of this study was to investigate the impact of collage making on self-reported anxiety levels. Participants were randomly divided into two groups: a collage-making group with pre-cut and pre-torn images, and a group given magazines to source images.

My hypothesis was that if adults engage in making a collage they are more likely to exhibit reduced anxiety. Further, I hypothesized that participating in collage making by looking through magazines will decrease state anxiety levels to a greater degree than the pre-torn and pre-cut condition.

If you are interested in learning more about the effects of art therapy on anxiety, the following literature can provide further insight:

Aaron, R. E., Rinehart, K. L. & Ceballos, N.A. (2011). Arts-based interventions to reduce anxiety levels among college students. *Arts & Health*, 3(1), 27-38, doi: 10.1080/17533015.2010.481290.

If you are experiencing any residual anxiety after this study, here are some resources that are Available:

24 Hour Anxiety Hotline: 1(800) 950-6264

Mental Health Text to Chat. (2021). Retrieved from: <https://www.remedylive.com/anxiety>

Calming Techniques Video:
<https://www.youtube.com/watch?v=odADwWzHR24>

Baby Animals website:
https://www.boredpanda.com/cute-baby-animals/?utm_source=google&utm_medium=organic&utm_campaign=organic

Thank you for your participation.

If you are interested in receiving a copy of the results once the study has been completed, please put your email address below and return this part of the form. The results you receive will not be individualized, instead they will be the overall composite results from all participants:

Email Address: _____

Thank you for your voluntary participation in this study!

Table 1*Sociodemographic Characteristics of Participants at Baseline*

	n	%
Gender		
Female	25	75.8
Male	7	21.2
Ethnicity		
African American/Black	0	0
Asian	0	0
Caucasian/White	33	100
Hispanic/Latin	0	0
Multicultural	0	0
Native American	0	0
Pacific Islander	0	0
Other	0	0
COVID-related Anxiety		
Not at all	2	6.1
Somewhat so	10	30.3
Moderately so	12	36.4
Very much so	9	27.3

Note. $N = 30$ ($n = 16$ for pre-cut condition, $n = 17$ for magazine condition). Participants ranged in age from 30 to 65 years old ($M = 44.91$, $SD = 11.63$) and participant age did not differ by condition.

Figure 1

Collage Showing A Central Figure



Note. Participant M18 was a 65-year-old Caucasian male in the highest scoring anxiety group. He reported minimal reduction in self-report STAY:Y-1 scores.

Figure 2

Collage Showing Torn Images



Note. Participant M17 was a 30-year-old Caucasian female in the lowest scoring anxiety group. She reported significant reduction in self-report STAY:Y-1 scores.

Figure 3

Collage Showing Use of Entire Page



Note. Participant C09 was a 36-year-old Caucasian male in the pre-cut condition. He reported minimal reduction in self-report STAY:Y-1 scores.

Figure 4

Collage Showing Negative Space



Note. Participant C16 was a 30-year-old Caucasian male in the pre-cut condition. He reported minimal reduction in self-report STAY:Y-1 scores.